STATE OF CALIFORNIA

Energy Resources Conservation
and Development Commission

In the Matter of	)	
	)	
Application of the Delta	)	Docket No. 98-AFC-3
Energy Center (Calpine Corp. and	)	
Bechtel Enterprises, Inc.	)	
_____	)	

STAFF BRIEF ON ENVIRONMENTAL JUSTICE AIR QUALITY, AND PUBLIC HEALTH

I. INTRODUCTION

On November 18, 1999, the Commission's assigned committee ("Committee") held evidentiary hearings in Pittsburg on air quality, public health, socioeconomics, and environmental justice. In reality, the term "environmental justice" embraces, in the context of this siting case, all of these topics, justifying their joint consideration by the Committee. This brief summarizes the testimony and other relevant evidence presented on these issues.

II. ENVIRONMENTAL JUSTICE

A. What is "environmental justice"?

"Environmental Justice" is a term that arose at the beginning of the decade to describe the phenomenon, supported by various studies, of land use regulation or remediation that resulted in greater environmental hazards for minority groups and low income groups than for the population as a whole. The studies that gave rise to the term indicated that such groups were more likely to live near landfills and hazardous waste facilities (United Church of Christ Commission, 1987), and were more often exposed to severe air pollution, hazardous waste, contaminated fish, and agricultural pesticides. (EPA Environmental Equity Workgroup, 1990.) Other studies indicated that EPA enforcement standards for the cleanup of contaminated areas were not always evenly enforced: cleanup sometimes took longer in areas inhabited by

minorities and corporate fines were greater for the contamination of areas where minorities were not present.

The studies focused on allegedly indifferent government decision-making, including failure to provide adequate notice to affected communities, failure to provide for community participation in decision-making, failure to consider health consequences to nearby communities, and failure to consider cultural behaviors that exacerbated environmental consequences.

As a consequence, President Clinton issued an Executive Order requiring, among other things, that all federal agencies identify and address "disproportionately high and adverse human health or environmental effects of [their] programs, policies, and activities on minority populations and low income populations . . . ." (Exec. Order No. 12898, February, 1994.)

EPA has subsequently defined "environmental justice" as follows: "The fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment means no group of people, including racial, ethnic, or economic group should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies." (EPA, Final Guidance for Incorporating Environmental Justice Concerns in EPA's NEPA Compliance Analyses, April 1998 [emphasis added].)

B. Why should the Energy Commission comply with the federal executive order?

The Executive Order by its own terms applies to federal agencies. There is no federal legislation, and accordingly there are no adopted federal rules for the Order's implementation. However, two federal guideline documents provide some measure of guidance as to how agencies should implement the Order. The Council on Environmental Quality (CEQ) has oversight of federal government compliance with both NEPA and the Executive Order. It issued Guidance in 1997 titled Environmental Justice Guidance Under the National Environmental Policy Act ("CEQ Guidance"). In addition, EPA has issued its Final Guidance for Incorporating Environmental Justice Concerns in EPA's Compliance Analyses ("EPA Guidance"). (April, 1998.) The actual purpose of the EPA document is to "serve as a guidance to incorporate environmental justice goals into EPA's preparation of environmental impacts statements . . . under NEPA." (EPA Guidance, Sec. 1.0, Purpose.)

In other words, neither of these guidance documents can clearly be said to constitute legal requirements for state agencies such as the Energy Commission. However, they are the principal federal documents that describe how an environmental justice analysis should be done. It is currently legally unresolved as to whether state agencies delegated by EPA to issue federal Prevention of Significant Deterioration (PSD) permits are required to satisfy internal EPA requirements. This issue affects the Commission because the PSD permit is typically evaluated and issued in the context of the Commission process by air districts with delegated authority from EPA.

Given this uncertainty, Staff advocates that the Commission follow the federal guidance documents, and has followed the federal guideline documents in shaping its own analysis. Staff believes that the cornerstones of environmental justice, as expressed through the federal guidelines, are already largely observed by the Commission. The Commission has always had broad public outreach, an open public process that (through multiple workshops and hearings) facilitates public comment and participation, and a duty under the California Environmental Quality Act (CEQA) to examine cumulative environmental impacts. Public outreach, opportunities for public participation, and consideration of cumulative impacts are the most critical considerations regarding environmental justice issues. (See EPA Guidance, Secs. 4.0-4.2.; CEQ Guidance, pp. 6-11.)

C. What is the purpose of the analysis prescribed by the federal guideline documents?

Documents prepared by federal agencies to satisfy the National Environmental Policy Act (NEPA) are primarily documents to inform the decision-maker and the interested public. Unlike CEQA, its California equivalent, NEPA can be described as procedural, in that unlike CEQA it does not require agencies to avoid or mitigate environmental impacts whenever feasible. (CEQA Deskbook, Bass, Herson, and Bogdan, 2nd ed., 1999, p.139 [Citing Robertson v. Methow Valley Citizens Council (1989) 490 U.S. 332, 351-353].) Thus, the federal guideline documents emphasize that the environmental justice analysis for NEPA documents is an internal requirement for informational purposes. For instance, the CEQ Guidelines provide the following context:

> This guidance is intended only to improve the internal management of the Executive Branch. It shall not be deemed to create any right, benefit, or trust obligation, either substantive or procedural, enforceable by any person, or entity, in any court against the United States, its agencies, its officers, or any other person. Consequently, neither the Guidance nor the deliberative processes or products resulting from the implementation of this Guidance shall be treated as establishing standards or criteria

> that constitute any basis for review of the actions of the Executive Branch. Compliance with this Guidance shall not be justiciable in any proceeding for judicial review of agency action. (CEQ Guidelines, 1997, Appendix A, Introduction, p. 18.)

The EPA Guidelines similarly emphasize the NEPA context:

> The purpose of this guidance is to assist EPA staff responsible for developing EPA NEPA compliance documentation . . . in addressing environmental justice. This guidance is intended to . . .[1] heighten awareness of EPA staff . . ; [2] present basic procedures for identifying and describing . . .where environmental justice issues may be encountered; [3] present methods for communicating with the affected population . . . . (EPA Guidelines, 1998, Sec. 1.0 Introduction.)

D. What criteria indicate an environmental justice issue?

1. <u>There must be a protected population in the zone of impact of the project</u>. Agencies are first required to address whether or not a project or agency action affects a minority/low income population. Both CEQ and EPA Guidelines indicate that this involves a screening analysis that is in essence numeric: using census data, is the population in the affected area (1) more than 50 percent minority/low income; or 2) is the minority/low income population in the affected area "meaningfully greater" than that of the general population or "other appropriate unit of geographical analysis." (EPA Guidance, Sec. 2.1.1.) In addition, agency analysts should be watchful for "high concentration 'pockets' of minority populations [that] are evidenced in specific geographic areas." (<u>Ibid</u>.)

2. <u>There must be an environmental impact that is "high and adverse</u>." The federal guidelines clearly intend this to apply to both health effects and environmental effects in the broader context. (CEQ Guidelines, p. 20.) However, the federal guidelines indicate that "high and adverse" effects are the same as "significant" effects in a NEPA context. (CEQ Guidelines, p. 20; EPA Guidelines, Sec. 3.2.2.) This is essentially the same as a "significant adverse impact" in a CEQA context, and is indicative of the relative intensity of the impact.

3. <u>The high and adverse impact must disproportionately affect minority/low income persons</u>. In effect, the environmental effect (or health hazard) must appreciably exceed the risk rate or impact on the general population or other appropriate comparison group. (CEQ Guidelines, p. 20.) The guidelines also state that a disproportionately high and adverse impact can occur from "cumulative or multiple adverse exposures from environmental hazards," thus emphasizing the importance of cumulative impact analyses.

E. The guideline analysis indicates that the affected population is not predominantly minority or low income.

The testimony at the evidentiary hearing confirms that Staff has followed the federal guidelines in performing its analysis regarding environmental justice.

First, Staff defined the "affected area" as a five mile radius from the project based on the potential for cumulative air quality (including toxic air contaminants) impacts in the vicinity. (RT 315 [Stennick]) The evidence of record indicates that the population living within this radius is less than 50 percent minority, and far less than 50 percent low-income. (Exh. 20, pp. 256-260, Exhs. 51, 61.) Since the 1990 census data was challenged as dated, Staff acquired more recent demographic projections that confirmed its prior conclusions: (1) a clear majority of the population within the five mile radius (58 percent) are non-minority (Exh. 61, Table 2); (2) the majority of all census tracts within (or partially within) the five mile radius are non-minority (ibid.); (3) the low-income population in the affected area is far below 50 percent (Exh. 20, Table 8); and (4) the minority/low income population within the affected area is not "meaningfully greater" than that of the general population, including that of the geopolitical unit of Pittsburg (ca 64 percent hispanic/non-white). (Exh. 61, Table 3.)

At hearing, Intervenor CAP-IT implied during cross-examination that the "affected area" enclosed within the five mile radius was too small, and that the Staff should have instead included the entire geopolitical unit of the City of Pittsburg. In Staff's view, this contrivance to include the geopolitical unit without regard to impact would have "artificially inflated" the minority population, a practice inconsistent with the federal guidelines. (EPA Guidelines, Sec. 2.1.1., CEQ Guidelines, p. 19.) Rather than an arbitrary geopolitical unit, the "affected area" should be "interpreted as that area which the proposed project will or may have an effect on." (EPA Guidelines, Sec. 2.1.1.) Staff's air dispersion modeling indicated that the predominant air quality impacts are within roughly 5 miles of the plant. (See Exh. 55, pp. C-10, C-11, C-12; Exh. 20, pp. 34-35 [maximum impact points for toxic chemicals].)

Other intervenor questioning and public comment was to the effect that the Staff's "affected area" radius was too broad, and should have been more tightly drawn. However, it was left unclear as to how or whether a smaller radius would have affected the demographic analysis, and no evidence was presented on that point.

Intervenor Community Health First in public comment postulated that the EPA Guidelines go below the census tract level, and that even "three individuals" (RT 369) could constitute a "pocket" that defines an

environmental justice issue. Although the Guidelines do provide that it is sometimes appropriate to look beyond census tract data, intervenor's household definition of "pocket" finds no support in the guidelines. Moreover, an inquiry of demographics at the sub-census tract level performed by Calpine's witness uncovered no evidence of highly concentrated protected populations at that level. (RT 342-343 [Crisp].)

The testimony cited above indicates that the affected population is predominantly neither minority nor low-income. There is no evidence other than conjecture that has been offered to the contrary.

F. The project does not constitute a "high and adverse" environmental impact or hazard, in either a direct or cumulative context.

As will be discussed in detail under "Air Quality" and "Public Health" below, the evidence indicates that the project does not represent any significant environmental risk to any population. The project does emit PM0 and ozone precursors; Staff considers the project's emissions of these criteria pollutants to be a potential significant cumulative impact because the air district is not "attainment" for the federal ozone standard or the state 24 hour average PM10 standard. However, these impacts will be fully mitigated by offsets of ozone precursors and PM10 pollutants. Section 15064 of the CEQA Guidelines provides how agencies are to determine whether a project's impacts are significant in a cumulative context:

> (i)(2) A lead agency may determine . . . that a project's contribution to a significant cumulative impact will be rendered less than cumulatively considerable and thus is not significant. . . .
>
> (3) A lead agency may determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project will comply with the requirements in a previously approved plan or mitigation program which provides specific requirements that will avoid or substantially lessen the cumulative problem (e.g., water quality control plant, air quality plan, integrated waste management plan) within the geographic area where the project is located. Such plans or programs must be specified in law or adopted by the public agency with jurisdiction over the affected resources . . . .
>
> (4) The lead agency may determine that the incremental impacts of a project are not cumulatively considerable when they are so small that they make only a de minimis contribution to a significant cumulative impact caused by other projects that would exist in the absence of the proposed project . . . . A de minimis contribution means that the

environmental conditions would essentially be the same whether or not the proposed project is implemented.

(5) The mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the proposed project's incremental effects are cumulatively considerable.

The Air District is charged with implementing the state and federal air acts. Consistent with those acts, it has adopted a programmatic approach that requires offsets for emissions that contribute to the nonattainment status of the district for a particular pollutant. Thus, the District requires offsets for PM10 and ozone precursors. The District's plan has been implemented by adopted regulation. Thus, by requiring that the project provide offsets contemplated by the District's plan, the Commission may consider the cumulative impacts of these emissions to be less than cumulatively considerable, and thus less than significant under the CEQA Guidelines set forth above.

Regarding public health (i.e., emissions of toxic air contaminants, or "TACs"), standard risk assessments were performed by Calpine, Staff, and the Air District. All three concluded similarly that the risk represented by the project was so slight that the risk for cancer or other health effect would be roughly the same whether or not the project was built. (See the discussion of the evidence under Public Health, "IV.C", below.) This level of risk is what CEQA defines as de minimis, not cumulatively considerable, and thus not a significant cumulative impact. Thus, the evidence of record indicates that the project does not present a "high and adverse" health risk or environmental effect, as defined by the federal environmental justice guidelines.

G. The effects of the project do not fall disproportionately on a minority/low income population.

The evidence of record indicates that there is likewise no disproportionate impact from the project on minority/low income populations. Disproportion might be inferred if the affected population were itself disproportionately minority or low income; however, as discussed above, it is not.

Disproportion might also be evidenced by cultural or behavioral patterns that result in a greater impact to a protected population. An example would be the impact of contaminated fish on a minority population that, for cultural or economic reasons, consumes significantly higher quantities of fish than the predominant population. (CEQ Guidance, p. 22.) However, no evidence in this case supports the conclusion that a similar cultural or behavioral pattern occurs within the population affected by the project. Accordingly, the

evidence indicates that the impact is neither "high and adverse" nor disproportionately borne by minority/low income populaces.

H. The Energy Commission proceeding has included extraordinary public outreach and public participation.

Perhaps the most important aspect of the concept of environmental justice is community outreach and opportunity for involvement. The evidence of record demonstrates extraordinary measures by both the Energy Commission and the applicant to ensure that such outreach and involvement was sufficient.

The Commission's Public Advisor made vigorous attempts to find interested persons and groups and encouraged participation in the proceeding. (Exh. 66.) This included posting copies of the public notices in public places, speaking to local interest groups, the Chamber of Commerce, a local Spanish language TV station, and local homeowner associations regarding the project and the prior Pittsburg Enron project. (Ibid.) As a result, a local environmental group (CAP-IT), the school district, and the City of Antioch became intervenors in either or both projects. The Public Advisor also spent a significant amount of time with various intervenors explaining the process and facilitating intervenor/public involvement.

Commission Staff sent notices to all property owners within 1000 feet of the project or its linear facilities, including transmission lines, water lines, and gas pipelines. (Ibid.) This included more than 500 residents and businesses. The AFC application was placed in local libraries and provided to local public agencies, as well as state and federal agencies. Press releases were provided to local newspapers and radio and television stations, and were followed up by additional releases during the course of the proceeding. (Ibid.) The notice and critical documents were provided on the Commission's "web-site", and a public notice was placed in the Contra Costa Times. (Ibid.) In addition, throughout the proceeding Staff, the Public Advisor, and the Committee have utilized electronic "e-mail" to informally provide timely information to those intervenors requesting it.

The Commission Staff conducted eight publicly noticed workshops on various issues of interest, and these were held in Pittsburg in the evening to facilitate public attendance. All critical public hearings have been held in Pittsburg during evening hours; the one hearing held in Sacramento provided telephone conferencing for intervenors who were interested in participating.

In addition to the above, the applicant did its own community outreach, which consisted of 19,000 letters to the public in the local area, publicized

events including “open house” meetings, contacts with local media, and other information efforts that have been detailed in responses to intervenor data requests.

The City of Pittsburg has participated actively with regard to both this proceeding and the prior proceeding concerning the Pittsburg Enron project. The City Manager, Head Planner, Economic Coordinator, and Public Works Engineer have either attended or been represented at many of the various public meetings, workshops, and hearings mentioned above. In addition, the City of Antioch has intervened and participated actively in the process, as have other local government entities such as the Delta Diablo Water District.

It is equally important to emphasize that intervenors in Commission proceedings have far more opportunity to participate in and influence Commission decisions than that commonly availed by the typical CEQA process. In the typical CEQA process agencies hold one public hearing for public comment; agencies then respond in the Final EIR to all written comments and any oral comments at that single public hearing. The public has no right to attend meetings between the project proponent and the agency staff and the agency decision-makers. The public has no right to interrogate agency staff about its analysis and assumptions, nor to suggest, early in the process, different considerations for that analysis prior to release of the Draft EIR.

By contrast, an intervenor in the Commission’s process is entitled to attend meetings the Staff has with the project applicant. Intervenors may send formal data requests to staff, the applicant, or any other party. Since the Commission process is iterative, with a series of Staff analyses and (later) Commission decisional documents, intervenors have greater opportunity to follow the development of the analysis and influence it. Analysts for both the Staff and the applicant must provide the basis for their conclusions in public oral testimony at hearings, and submit to cross-examination from all parties, including intervenors. Ultimately, intervenors have the right to brief the Commission on their view of the evidence and legal requirements, and to argue their points before the decision-maker.

The Commission’s process is defined by state law as an adjudicatory (or in vernacular, “trial-type”) proceeding. This makes the process more involved and more demanding on all participants, including the intervenors themselves. However, it avails the public a far greater opportunity to effectively participate and make their views heard than does the traditional EIR process, and provides a far greater opportunity for the public to affect the final decision.[1]

[1] An example of effective intervenor influence can be found in the prior Pittsburg Enron proceeding. In that proceeding, intervenor CAP-IT argued that the Commission should require an additional air monitor, paid for by the applicant, in the City of Pittsburg. Neither Staff nor the

III. AIR QUALITY

A. Impact Significance Criteria

The CEQA Guidelines provide an encompassing set of indicative criteria for determining whether a project will have a significant adverse air quality impact. These criteria are whether a project would 1) conflict with or obstruct implementation of the applicable air quality plan; 2) violate any air quality standard or contribute substantially to an existing or projected air quality violation; 3) result in a cumulatively considerable net increase of any criteria pollutant for which the region is "nonattainment" for state or federal standards; 4) expose sensitive receptors to substantial pollutant concentrations; and 5) create objectionable odors affecting a substantial number of people. (Cal. Code Regs., tit. 14, Appendix G ["CEQA Guidelines, Appendix G"].)

"Air Quality," as that term is used here, pertains to the emissions of the project for which there are state and federal emissions standards (i.e., "criteria air pollutants"). The discussion under "Public Health" addresses non-criteria pollutants, which are generally termed "toxic air contaminants," or "TACs".

It is possible for an air quality impact from a project to be "direct," such as smoke, toxic chemical emissions, or odor from a project that is noxious to the community. Criteria 2), 4), and 5) of the above-cited Appendix G criteria addresses such impacts. However, for gas-fired power plants in California, it is more common for any air quality impacts to be cumulative by nature, meaning that the impact has significance only because of the background of existing emissions from mobile sources (i.e., motor vehicles), natural sources (typically dust or sea spray), other anthropogenic sources (e.g., firewood smoke), and other industrial sources. Such cumulative impacts are addressed by criteria 1), 2), and 3) of the CEQA Guidelines, Appendix G.

Each of the significance criteria is discussed separately below.

B. The current status of air quality in the air district.

The Bay Area Air Quality Management District ("Air District") encompasses a large area that includes the entire Bay Area air basin. It thus extends from the San Jose area to San Francisco to Suisun and the eastern delta.

---

applicant believed such an additional monitor to be justified by the project's impacts. However, the Commission was persuaded by CAP-IT, and required the applicant-funded monitoring.

For federal standards, the Air District is nonattainment for ozone, but attainment or "unclassified" for carbon monoxide, nitrogen dioxide, sulfur dioxide, lead, and particulate matter. (Exh. 63 [PG&E Divestiture EIR], Table 4.5-9.) Monitoring data indicates that the Air District does not exceed the federal standards for any of these criteria pollutants other than ozone. (Exh. 63, Table 4.5-3.)

The Air District has in recent years been on the margin of compliance with the federal ozone standard. In 1995 EPA approved the Air District's request to redesignate the District "attainment," only to subsequently announce in 1998 that the District would be designated nonattainment because of monitored violations in 1995 and 1996. (Exh. 63, pp. 4.5-8, 4.5-9, 4.5-16.)

The air district is nonattainment for the state ozone and 24-hour average PM10 standard. (Exh. 63, Table 4.5-2.) The state ozone standard is exceeded on average about five days per year. (Exh. 63, p. 4.5-39.) The state 24-hour average PM 10 standard is violated occasionally (2 days out of 67 monitored in 1997). (Exh. 63, Table 4.5-12.)

The state ozone and PM 10 standards are more stringent than the federal standards (Exh. 63, Table 4.5-1), particularly for PM10 (federal 24-hour average standard: 150 ug/m3; state standard: 50 ug/m3).[2] However, unlike the federal standards, the state standards do not require schedules for compliance or penalties for noncompliance.

In 1997 EPA adopted new standards for ozone, PM 10, and PM 2.5. (Exh. 63, p. 4.5-7.) These standards have subsequently been remanded to EPA for reconsideration pursuant to judicial decision. (American Trucking Associations v. EPA (D.C. Cir. 1999) 175 F.3d 1027.)

C. The project does not have a significant air quality impact.

1. The project does not conflict with the applicable air quality plan.

In the context of the Commission's siting process, local air districts are required to provide a "Determination of Compliance" assessing whether a project complies with the District's rules before the project can proceed. (Cal. Code Regs., tit. 20, Sec. 1744.5.)
The Air District has provided this determination. (Exhs. 58, 59 [FDOC].) The Air District witness, Dennis Jang, testified that the FDOC confirms that, with imposition of the conditions proposed therein, the project will comply with all

[2] The abbreviated term "ug/m3" designates micrograms per cubic meter.

Air District requirements, and with state and federal regulations. (RT 143.) These requirements include Best Available Control Technology (BACT), New Source Review (NSR), and emission offsets for ozone precursors and PM 10, PSD requirements, and toxic risk management policy. (RT144.) Mr. Jang also testified that the FDOC's PSD analysis indicates that the project will "not interfere with the attainment or maintenance
of any applicable air quality standards." (Ibid.)

Under cross-examination, applicant's witness testified that he had met with EPA to discuss VOC emissions levels, that EPA was satisfied with the Air District's requirements of a BACT requirement of 2 ppm, and that actual emissions would be below 1 ppm. (RT 81-83.) Requiring 1 ppm would have reduced the applicant's offset obligation, with no corresponding reduction in emissions. (Ibid.)

The Staff's witness, Mr. Badr, testified in agreement that all Air District, state, and federal standards are met by the project. (Exh. 54, pp. 22-23 [FSA,Part 2]; RT 109-110, 121.)

2. The project will not violate any air quality standard or contribute substantially to an existing or projected air quality violation.

As discussed above, the project meets all Air District requirements, and all state and federal emissions requirements. As such it does not violate any air quality standard. Whether it may "contribute substantially to an existing or projected air quality violation" may also be interpreted to address whether or not the project has a significant cumulative impact with regard to emissions of criteria pollutants for which the Air District is nonattainment. This issue is discussed under "3." below.

3. The project will not result in a cumulatively considerable increase of any criteria pollutant for which the project region is nonattainment.

The emissions from the Delta Energy Center are clearly not substantial enough to result in a direct violation of the state ozone and PM 10 standards. As discussed above, these standards are infrequently violated, and the contribution of the project to regional emissions is relatively small. (See Exh. 63, Table 4.5-17.)[3] However, the project's emissions are potentially "cumulatively considerable" under CEQA because they have the potential to contribute to an existing air quality problem. This existing problem is failure to

[3] The referenced table indicates that the annual worst case emissions of Nox from the Pittsburg PG&E facility in 1997 was 1944 tons, which was 1.19 percent of regional emissions of that pollutant. The Delta project will emit a worst-case 298 tons of Nox per year (Exh. 8, p.8), clearly representing a far smaller regional contribution.

attain the state and federal ozone standards, and the state 24 hour average PM10 standards. Thus there is the potential for the project to result in a "cumulatively considerable net increase of any criteria pollutant for which the project region is nonattaiment under an applicable federal or state ambient air quality standard." (CEQA Guidelines, Appendix A, Air Quality.)

If the project's contribution to existing air quality was without mitigation, Staff would conclude that the project results in a significant cumulative impact as defined by CEQA. However, the Air District's rules require offsets for PM 10 and ozone emissions.

"A lead agency may determine that a project's contribution to a significant cumulative effect is not cumulatively considerable if the project will comply with the requirements in a previously approved plan or mitigation program which provides specific requirements that will avoid or substantially lessen the cumulative problem (e.g., water quality control plan, air quality plan, integrated waste management plan) within the geographic area in which the project is located. Such plans or programs must be specified in law or adopted by the public agency with jurisdiction over the affected resource . . . ." (Cal. Code Regs., tit. 14, Sec. 15064(i)(3) [emphasis added].)

The Air District has adopted an air quality management plan which has an elaborate system of specific requirements, including purchased "offsets," as a mitigation program "to avoid or substantially lessen the cumulative problem." This programmatic approach includes BACT for NO_x emissions, resulting in emission levels that are less than 2.5 parts per million (ppm) at a one hour average—-one of the most stringent requirements ever imposed on a power plant facility. The program also requires retrofit requirements on existing industrial facilities such as power plants to continually "ratchet down" their current emissions. (RT 43-47.)[4]

The emissions "offsets" required by the Air District rules are reductions in emissions that have already occurred and which have to be in an amount at least as great, if not greater, than the increase in emissions that the project will produce. (RT 38.) The offsets approach is longstanding (required by the federal Clean Air Act since 1977), and is the marriage of the goals of improved air quality with continued economic growth. (RT 39, 47.)

[4] The Air District's Rule 9-11 applies to the former PG&E facilities, including the Contra Costa and Pittsburg power plants purchased by Southern. Rule 9-11 will require these facilities to reduce their emissions by 90 percent from their 1995 emission levels by 2005. (Exh. 63, p. 4.5-18; RT 43-47.) The Air District will continue to apply Rule 9-11 to the former PG&E facilities, and will revise its rules next year to reflect the change in ownership. (RT 46 [Rubenstein]; RT 144-145 [Jang].) As a result, the contribution of the former PG&E power plants to region-wide emissions has been greatly reduced, and will be subject to further substantial reduction. (Exh. 63, p.4.5-18, Table 4.5-4.)

The offsets program has evolved into a market-based "banking" program that allows existing facilities to reduce emissions and "bank" them, after check and approval by the district, for purchase by new emitters. (RT 47-49.) The banking system allows the system to get the benefit of reduced emissions before there is a purchaser; this eliminates any incentive to "sit" on a continuing pollution source until a purchaser can be found. In effect, it allows the offset benefit to be available in advance. (RT 49-50.)

In the Bay Area, and California generally, the two criteria pollutants of concern are ozone and PM 10, and this concern is essentially regional in nature. (RT 50-51.) Thus, the Air District, like most air districts in the state, allow the purchase of offsets anywhere within the air basin. (Ibid.) This is consistent with a regional, long term air management strategy: a North Bay emitter may purchase a South Bay offset, and a South Bay emitter may subsequently purchase a North Bay offset. (RT 51.) Over time, the regional air quality is thus improved. (RT 51-52.)

However, despite the greater latitude for offset purchases allowed by the Air District, the Energy Commission has typically required its applicants to attempt to purchase offsets closer to the project. (RT 52.) This more stringent requirement is based on the view that regional proximity is more likely to assure that the offset mitigates the project's impact. Based on that expectation, and with Staff's encouragement, the applicant has purchased its offsets insofar as possible in the general region of the project. (RT 52-53.)

Staff has strongly encouraged attempts to purchase project offsets in the local region-—a requirement more stringent than that of the Air District. In addition, Staff requested the Air District to require offsets for cooling tower PM 10 emissions—-something the Air District would not otherwise require. (Exh. 54, p. 22, RT 40.) In addition, Staff convinced the Air District to include in its FDOC conditions supplemental requirements for reducing fugitive dust emissions during construction. (Ibid.)

Thus, the project will be required to provide its "fair share" of mitigation for its air impacts in the form of offsets. The CEQA Guidelines provide that "[a] project's cumulative impact will be rendered less than cumulatively considerable if the project is required to implement or fund its fair share of a mitigation measure or measures designed to alleviate the cumulative impact." (Cal. Code Regs., tit. 14, Sec. 15130(a)(3)[emphasis added].) This "fair share" goes even beyond the Air District's normal requirements, as discussed above. In addition, the project is subject to the most stringent BACT requirements for NO_x in the nation. In light of the above, the project's impacts can not be considered "cumulatively considerable," and thus cumulatively significant, in a CEQA context.

4. The project will not expose sensitive receptors to substantial pollutant concentrations.

In the context of a gas-fired power plant, the scope of this topic is primarily toxic air contaminants ("TACs") rather than criteria pollutants. TACs were analyzed using the approved methods of risk analysis by both the Staff and the Air District. Both Staff and the Air District concluded that the TAC emissions from the plant were so slight that they would not result in any likelihood of cancer or other adverse health effect. In effect, the TAC impact of the project is de minimis, and thus would not constitute a significant adverse impact even in a cumulative context. This will be discussed in greater detail in a subsequent section, "Public Health."

However, the Staff also performed a cumulative impact analysis of the worst-case cumulative impacts of the project for two criteria pollutants-—PM 10 and NO2. (Exh. 55.) This analysis considered the combined worst-case emissions of the Delta project (RT 129-130), the recently licensed Pittsburg Enron project (ibid.), and the existing operation of the two local Southern (former PG&E) power plants, assuming that such plants were to be operated at their maximum feasible ("worst case") output as a result of electricity deregulation. (Exh. 55, p. 1-1.)[5]

Staff used the CALPUFF dispersion model for this exercise, as it is the most advanced model for this kind of analysis and considers more complex weather influences. (RT 128-129.) The modeling results were depicted on isopleth maps. Even with these worst-case assumptions, NO2 impacts were always far below the most stringent ambient air quality standard. (RT 131.) For Delta, the highest one hour and annual NO2 concentrations were a small fraction of state and federal standards, and were modeled to occur adjacent to the plant. (Exh. 55, pp. C-10, C-11.)

PM 10 impacts were, even using worst case, well below the Air District's PSD threshold for significance (5ug/m3 24 hour; 1 ug/m3 annual, citing District Rule 2-2-233) for both the 24-hour average impact (2.25 ug/m3) and annual impact (0.39 ug/m3). (Exh. 55, pp. C-12.) It is noteworthy that even these less than significant impacts were immediately adjacent to the plant and not in residential areas. (Ibid.)

[5] The numbers used in Staff's cumulative modeling assessment (Exh. 55) for the Southern power plant emissions were taken from the PG&E Divestiture EIR (Exh. 63). (RT 130-131.) The Divestiture EIR analyzed the Southern plant impacts assuming the "analytical maximum" production of these plants rather than historic production levels. The "Analytical Maximum case" emission "estimates represent the condition whereby the plants will be run at their highest possible capacities in light of technical and demand restraints," assuming unlimited supplies of very cheap natural gas. (Exh. 63, p. 4.5-55.) This represents "maximum possible impact," i.e., worst case. (Ibid.) The result of these conservative assumptions is a 300-400 percent increase in modeled emissions compared to the pre-1997 emissions levels. (Id**.,** at Table 4.5-24.)

The highest modeled PM 10 impacts are from the Pittsburg Southern plant. Its impacts, although modeled above the 5.0 significance level, occur adjacent to the plant, and have little significant overlap effect on the modeled levels at the other power plants, or in any place other than adjacent to the existing Southern facility. (RT 131-132; see Exh. 55, p. 5-9.) For instance, the representative isopleth indicates that at no point more than one kilometer from the project is the cumulative impact of all projects above 4 ug/m3; at no point greater than two kilometers from the Southern plant is the cumulative impact of all projects greater than 3ug/m3. (Ibid.)

Notably, applicant's witness, Mr. Crisp, testified that he had examined the "footprint" of the air quality impacts depicted on the isopleths. Crisp testified that the highest 24-hour average PM10 footprint lies in an area that is less than 50 percent minority; that the highest average annual PM 10 impact footprint lies in an area that is less than 50 percent minority; that the highest 24-hour average annual NO2 footprint lies in an area that is less than 50 percent minority; and that the highest annual average NO2 footprint lies in an area that is less than 50 percent minority. (RT 339.)

Staff testified that the maximum PM 10 concentrations from the four facilities modeled do not overlap, and that the highest projected emissions do not occur in winter, when PM 10 levels occasionally exceed the state standard largely due to fireplace smoke, vehicle emissions, and other sources. (RT 131-132, 135.) Staff also testified that PM10 levels recorded at Bethel Island, a representative location, indicate that the region's ambient levels are actually lower than those of most other areas in the state. (RT 132-134, Exh. 74.) Bethel Island is probably worse for PM 10 than areas further west, such as Pittsburg, because it is influenced by the San Joaquin Valley, which has higher ambient PM10 levels. (RT 137-138.)

Staff also testified that the Air District's programmatic approach-—no net increase of industrial emissions, Rule 9-11, lower emissions from vehicles due to reformulated fuels, CARB emission standards for heavy duty vehicles, and Air District voluntary programs to reduce fireplace woodburning—-should lead to progressively lower emission of PM 10 and PM10 precursors. (RT 138-139, Exh. 54, p. 18.) Based on all of the above, the Staff witness on cumulative localized impacts concluded that any such impact from criteria pollutants was less than significant. (RT 132-140, Exh.54, p. 18.)

5. The project does not create objectionable odors affecting a substantial number of people.

Gas-fired power plants do not typically result in any odor problems. The Air District's FDOC concluded that the project will not result in any community nuisances or annoyances (Exh. 58, p. 23), and that the project will comply with

Air District rules prohibiting discharge of odors beyond the property line. (Id., at p. 25.) There is no evidence of any kind contradicting this conclusion.

D. Miscellaneous Issues

1. Bethel Island is a representative monitoring station for PM 10.

Intervenors have contended that the data on PM 10 ambient levels collected at Bethel Island is not representative of ambient levels in Pittsburg. Staff testified that it is an appropriate and representative site because of proximity and the fact that it lies in the east-west fluctuation that dominates the local/regional wind pattern. (RT 111-112.) Ozone levels measured in Bethel Island correlate well to levels measured in Pittsburg, making it likely that PM10 levels would also correlate. (RT 112.) If anything, the PM 10 levels at Bethel Island may be higher than those in Pittsburg, due to Bethel Island's proximity to the San Joaquin Valley, which experiences higher ambient PM 10 concentrations. (RT 137-138.)

2. The Air District requirement for ammonia slip is appropriate for the project.

Intervenors have suggested that the Air District's requirement for ammonia slip—-10 ppm-—is too high, siting a recent CARB guideline suggesting that a lower limit (5 ppm or less) is appropriate. However, the CARB guideline is based on an assumed NO_x level of 2 ppm on a three hour average. (RT 117.) The project is being limited to 2.5 ppm NO_x on a one hour average. (RT 117-118.) The shorter averaging time may necessitate greater short-term ammonia use, and hence higher ammonia slip, thus making the 10 ppm ammonia standard appropriate for a plant licensed at 2.5 ppm NO_x at one hour average. (RT 116-118.)

3. Intervenor's PM 10 calculations regarding ammonia slip are incorrect.

One intervenor suggested that ammonia slip will lead to very high levels of secondary PM 10 formation because ammonia can combine with NO_x to form ammonia nitrate. Trying to calculate secondary PM 10 based on its pound for pound conversion to ammonia nitrate is, to use the words of the Staff witness, "very misleading." (RT 113.) The conversion process to ammonia nitrate is very complex, requiring an unstable gas (ammonia) to quickly find available NO_x. (RT 113-115.) Rather than a pound for pound conversion, conversion will be "an order of magnitude" less, though it is very difficult to quantify because of variable meteorological conditions and varying ambient levels of NO_x. (RT 115.)

4. Why the Air District required no CO catalyst.

The Air District's FDOC does not require a CO (carbon monoxide) catalyst. (RT 149-150.) The testimony from both Staff (RT 149) and applicant's (RT 150) witnesses are that the project will meet BACT for CO without such a catalyst. Applicant testified that low hydrocarbon levels are met with current equipment with or without the catalyst. (RT 151.) Staff's witness testified that he is unaware of the Commission ever licensing a project without a CO catalyst. (RT 152.) Although the project will meet the CO and VOC standards, the advantage of the catalyst is lower hydrocarbon (VOC) emissions. (RT 147-148.) Applicant's witness pointed out that a similar plant in Texas is meeting the emission levels without the catalyst. (RT 152-153.) The FDOC has conditions requiring the installation of the CO catalyst if BACT levels are not achieved, and further requires that the heat recovery generator and other equipment be configured to allow the catalyst to more easily be installed if necessary. (RT 155.) The vendor has guaranteed that it will meet BACT without the catalyst (RT 156), but Calpine will promptly install one should emissions not meet the 2 ppm requirement. (RT 155-156.) Staff testified in agreement with applicant that EPA, in conversations subsequent to their comments on the PDOC, agreed that 2 ppm by volume of VOC was BACT. (RT 185-186.)

Applicant testified that the CO catalyst has the disadvantage of increasing PM 10 emissions (RT 150); Staff disagreed with this contention. (RT 148-149; Exh. 54, p. 20, and Appendix A.)

As is apparent in Staff's testimony, Staff has ambivalent feelings about whether the CO catalyst should be required by the Commission in addition to those requirements in the FDOC. The Commission has required CO catalysts for the other gas-fired projects it has licensed. However, the evidence indicates that the project will meet Air District BACT requirements without the catalyst. The applicant has argued that the catalyst has the unfortunate effect of increasing PM 10 emissions, more than offsetting the questionable benefits of the catalyst. Staff disagrees with this contention regarding higher PM 10. The FDOC requires catalyst installation if the BACT level is not met, and design that will accommodate any necessary retrofit.

Staff believes that the record is sufficient to require the CO catalyst as additional mitigation even though the Air District did not. Staff believes the record is also sufficient to support a finding that all laws and regulations will be met without the CO catalyst.

IV. PUBLIC HEALTH

A. The scope of "public health."

The issue of "public health" encompasses the emission of toxic chemicals into the environment. This means the focus is on "non-criteria" air emissions—-toxic compounds that can comprise a risk to public health. These chemicals are generally labeled "toxic air contaminants" or "TACs." TACs are substances generally believed to have carcinogenic or adverse non-carcinogenic effects, but are not subject to an ambient air quality standard.

TACs are regulated under both state and federal law. The federal 1990 Clean Air Act Amendments established Maximum Available Control Technology (MACT) for industries that emit more than 10 tons per annum of specified TACs or 25 tons per annum of combinations of such TACs. (Exh. 63, p. 4.5-11.)

In 1987, the state Legislature enacted AB 2588, the "Toxic Hot Spots" Information and Assessment Act. (Exh. 63, p. 4.5-11.) The Act requires the quantification of TACs from specified facilities, and these facilities are categorized according to their emissions levels and proximity to sensitive receptors. (Ibid.) High priority facilities are required to perform a health risk assessment, and if thresholds are exceeded, required to provide the results to the public in the form of notices and pubic meetings. If risks are high enough, facilities may be required to implement various risk reduction measures. (Exh. 63, p. 4.5-11; Health & Saf. Code, Sec. 44391 et. seq.)

Health effects can be either carcinogenic or non-carcinogenic. Carcinogenic risk is labeled "individual cancer risk"-—the likelihood that an individual exposed to specified levels of pollution will develop cancer over the course of a lifetime, based on standard risk assessment.

Cancer risks are based on the best estimates of plausible cancer potencies determined by the State Office of Environmental Health Hazard Assessment. Risk levels for each carcinogen are developed; when more than one carcinogen is involved, the risk numbers are summed. Total risk is then compared to a significance threshold standard, such as 1:100,000 (Proposition 65), or 1:1 million (CAPCOA).

Non-carcinogenic risks involve both health and nuisance concerns, and are based on known or estimated thresholds ("reference exposure levels") for sensitive individuals. (Exh. 20, pp. 24-25.)

B. Power Plant Emissions

Power plants have traditionally emitted large amounts of detectable and reportable TACs. Even existing facilities such as the Southern Portrero and Pittsburg power plants were emitting reportable quantities of a variety of TACs into the 1990s, including arsenic, benzene, beryllium, cadmium, chromium, formaldehyde, lead, manganese, mercury, nickel, and polycyclic aromatic hydrocarbons. (Exh. 63, Table 4.5-10, Table 4.5-18.)

However, after the phase out of oil burning (pursuant to Air District Rule 9-11) in 1995, the emissions of the above TACs declined to zero or less than reportable with two exceptions: benzene and formaldehyde. (Ibid.) These two substances together accounted for 100 percent of the reported contaminants emitted by these plants after they became gas-fired, and are the two TACs that are of principal relevance to gas-fired facilities. (Id., at p. 4.5-13; RT 243.)

Unlike an oil refinery, the organic compounds emitted by the project are typically below the limits of detection. (RT 225.) By contrast, an oil refinery has emissions several orders of magnitude higher, and hydrocarbon meters are routinely used to detect leaks. (Ibid.) Federal MACT requirements for TACs are not applicable to the project because its TAC emissions are simply not of great enough magnitude. (RT 224.)

Two TACs, benzene and 1,3 butadiene, contribute most of the cancer risk (nearly two-thirds) in the Bay Area. (Exh. 63, pp. 4.5-12, 4.5-13.) The source of these two emissions is over 90 percent from mobile sources. (Ibid.) Like benzene, formaldehyde risk is also largely due to mobile emissions. (RT 244.)

C. The Health Risk Assessment

The statistical likelihood that any given person will develop cancer during a lifetime is generally estimated to be 250,000: 1 million, or one chance in four (RT 221), although some estimates are even as high as 400,000:1 million. (Exh. 63, p. 4.5-12, fn. 1.) Environmental or chemical causes are estimated to cause no more than 1 to 5 percent of that total, with “lifestyle,” occupational, or genetic causes attributable to the rest. (RT 221-222.)

TAC lifetime inhalation cancer risk in the Bay Area has been estimated by the Air District to be 194:1 million in 1997. (Exh. 20, p. 35.) That risk has declined an estimated 40 percent since 1993 due to Air District or CARB requirements, such as clean fuels, Rule 9-11, and toxic “hot spots” requirements. (RT 244.) In the 1980s the risk was estimated to be above 500:1 million. (RT 245.)

The Health Risk Analysis evaluated by the Staff and the Air District was performed consistent with the requirements of the California Air Pollution Control Officers Association (CAPCOA). (Exh. 20, pp. 24-25; RT 241.) This risk analysis methodology is consistent with risk assessment methods developed by EPA, has been reviewed by the federal government, and is scientifically accepted. (RT 217.) That procedure emphasizes a worst-case "screening" analysis in order to evaluate the highest conceivable impact by:

1) assuming the highest expected levels of emissions from the source;
2) assuming weather that would result in the highest ambient concentrations;
3) using the computer model which results in the highest depicted impacts;
4) using health-based standards designed to protect the most sensitive member of the population (i.e., children, the elderly, and those with respiratory illness);
5) calculating the health risks to a person at the exact location where emissions are theoretically most concentrated (the "maximally exposed individual", or "MEI");
6) assuming that this most sensitive person is exposed to that exact maximum concentration of TACs for 70 years, 24-hours per day. (Exh. 20, p. 24.)[6]

This worst-case or screening analysis is performed not only for cancer risk, but also for short term (acute) health effects and long-term (chronic) non-cancer health effects. (Ibid.) For non-cancer health effects the maximum contaminant levels are compared to CAPCOA-devised "reference exposure levels"—-exposure levels that are understood to protect even sensitive individuals from any health effects. (Id., at pp. 24-25.)

Reference exposure levels (non-cancer risk) for some substances have been developed by EPA; others are taken from the state Office of Health Hazard Assessment, using a 100-fold safety factor applied to the threshold for the "no observed effects level." (Exh. 63, p. 4.5-29.) When the concentration level to the reference dose is in a ratio of less than 1.0 no health effect would be anticipated. (Id., at. pp. 4.5-29, 4.5-30.) An additional maximum impact ("worst-case") assumption, when multiple chemical exposures are involved, is to add the ratios of various emissions to obtain a "hazard index"; if that index is less than 1.0 no health effect would be anticipated. (Id., at p. 4.5-30, Exh. 20, p. 34.)

For cancer, the risk of each TAC is separately calculated; where there is more than one TAC, the risks are added. Due to the worst-case nature of the

[6] This is the calculation for residential receptors. A different calculation is used for workplace receptors. Residential receptors were assumed for the purpose of this analysis, an assumption which increases the "hazard index" for cancer.

assumptions, the final calculated risk number is likely to overestimate the actual risk. (Exh. 63, p. 4.5-28.)

The result of this risk assessment indicated that the project's maximum point of exposure is just over four miles southeast of the site, where hazard risk for cancer is 0.38 in one million. (Exh. 20, p. 35.) The "significance" standard for this screening analysis is 1:1 million,[7] meaning that a risk of less than 1.0 is essentially no increased risk at all—-de minimis risk. (Exh. 20, pp. 34-35; RT 214 [Lowe]; RT 247 [Ringer].) No person would be expected to get cancer in his lifetime as a result of TACs from this project. (Ibid.)

Similarly, the screening analysis indicated that the maximum risk for acute non-cancer effects from the project is located 2.5 miles southwest of the proposed site and is 0.058; the maximum risk for chronic non-cancer effects is located four miles southeast of the proposed site and is 0.035. (Exh. 20, p. 34.) The significance standard for this screening analysis is 1.0, meaning that project emissions would not result in any chronic or acute health impacts even to the most sensitive individuals at the maximum point of impact. (RT 214-215; RT 242.) From a CEQA standpoint this is categorized as a de minimis impact. (Cal. Code Regs., tit. 14, Sec. 15064(i)(4).)

D. The cumulative impact assessment.

Despite finding that cancer and non-cancer risks are essentially de minimis in the accepted regulatory context, Staff looked at the project's impacts in a cumulative context. It did this by looking simultaneously at the project's maximum impacts and those of the recently licensed Pittsburg Enron power plant, plus those of the existing nearby Dow Chemical plant. (Exh. 20, p. 35.)

The screening analysis indicated that the points of maximum impact of the three projects are broadly dispersed. Modeled dispersion varies with each facility because of different stack heights, different exhaust velocities, and the vagaries of modeled weather. (RT 255.) The modeled point of maximum impact of the Pittsburg Enron power plant is approximately 5.5 miles north of that of the project site. (Exh. 20, p. 35.) The point of maximum impact of the Dow facility has been modeled by the Air District to be in Antioch, four miles southwest of the impact location for Pittsburg Enron, and considerably north of the project's maximum point of impact. (Exh. 20, p. 35.) Thus none of the

[7] A significance threshold of 1:1 million is a relatively stringent level. For comparison, the Proposition 65 threshold of significance is 1:100,000, requiring impacts to be 10 times as high for an impact to be considered significant. (Exh. 63, p. 4.5-12.) Likewise, in the context of food additive risk assessment, the federal Food and Drug Administration has defined significance at 1:100,000 and further declared that a cancer hazard of less than 1:1 million is the equivalent of saying that no one is expected to get cancer. (Exh. 20, p. 26.)

maximum points of impact are even close to each other. (Ibid.) Given the disparate points of maximum impact, it would make no sense to add the risk factors. (RT 254.) In addition, the Pittsburg Enron facility is, like the project, a de minimis impact in the screening context even at its point of maximum impact. (Ibid.)

The Air District has also examined the issue of cumulative impacts, and concluded that "cumulative risks are likely to occur only when multiple facilities with substantial low-level emissions are immediately adjacent to, or very close to, one another." (Exh. 20, p. 36 [emphasis in original].) As the evidence indicates, neither the project nor Pittsburg Enron can be said to emit more than de minimis levels of TACs; they will simply not effect the existing environmental milieu in any discernable way.

E. Miscellaneous Issues

1. Synergistic chemical effects.

Intervenors have raised the issue of synergistic effects of two or more TACs that may increase cancer risk beyond that calculated by acceptable risk models. However, these statements have never identified which TACs may be synergistic, nor how this effect should be calculated. Notably, no synergistic effect regarding the two principle TACs emitted by the project-—formaldehyde and benzene—-has been alleged or identified.

The PG&E Divestiture EIR addressed the synergistic effect issue as follows:

> The summation of cancer risks for various chemicals is an approximation because either synergistic (i.e., cooperative, producing greater effect than expected) or antagonistic (i.e., opposing, producing less effect than expected) effects may occur as a result of exposure to various air toxics. Because sufficient data are not available to predict such health effects, health risk assessment guidelines, including federal and California procedures, assume that the health risks are additive (California Air Pollution Control Officers Association, 1993)." (Exh.63, p. 4.5-12, fn. 2.)

The Staff, applicant, and Air District have observed the risk analysis protocol developed and accepted by both the state and federal governments. It is an extremely conservative protocol designed to overpredict calculated hazards. To have deviated from this protocol without clear, scientifically based reasons to do so would have rendered an analysis that was meaningless and speculative.

2. Ambient TAC levels in Pittsburg.

On the day of the November 18, 1999, evidentiary hearing, one intervenor introduced documents depicting "bucket" air sampling results performed by CAP-IT on two different dates in November 1999. (Exh. 71.) The samples purport to provide a "snapshot of the 'soup' of air toxics" at a given moment and place in Pittsburg. (Ibid.)

Such "snapshots" are interesting, although their meaningfulness should be qualified. Measured levels of TACs will fluctuate greatly on a daily or even hourly basis, depending on weather and the proximity and activity of local emitters. (RT 253.)

Such information is certainly less meaningful than Air District information measuring mean annual concentrations. Such data collected at the Antioch station in 1994 and 1995 indicated benzene levels significantly lower than averages for the Bay Area as a whole. (Exh. 63, Table 4.5-13.) Other chemicals, such as tuolene and 1,3 butadiene, were also significantly below the Bay Area mean, while certain others were above it. (Ibid.) In any case, there is simply no reliable evidence that TACs in Pittsburg are significantly higher than the Bay Area average.

V. CONCLUSION

Staff has thoroughly examined the air quality and public health impacts of the project, with specific attention to cumulative effect. It has also evaluated the possibility that any effect might have a disparate impact on a minority or low-income population.

The evidence is conclusive that there will be no significant air quality or public health impact from the project. The evidence is conclusive that such impacts, with implementation of the proposed conditions and mitigation, will be de minimis impacts that are not "cumulatively considerable" in a CEQA context.

The evidence is also conclusive that the affected population is not one that would indicate an "environmental justice" issue for the Commission. Even if there were such a population in the affected area, under EPA/CEQ guidelines there can be no environmental justice "problem" without a "high and adverse" (or "significant") impact. There is clearly no such impact.

The Commission outreach regarding the project is without doubt beyond that of any other agency in the state, if not the nation, for projects of similar effect.

The project is fully mitigated, and that mitigation goes well beyond what other agencies (including the Air District) would require were they the licensing agency. The project will comply with all applicable standards, and specifically those protecting public health.

Dated: December 3, 1999

_____
RICHARD C. RATLIFF
Senior Staff Counsel